A PERFORMANCE AND QUALITY IMPROVEMENT APPROACH FOR VILLAGE HEALTH WORKERS IN COMMUNITY-BASED MATERNAL, NEWBORN, AND CHILD HEALTH

BASELINE ASSESSMENT REPORT
MUTARE AND CHIMANIMANI DISTRICTS, ZIMBABWE
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MCHIP ZIMBABWE TECHNICAL TEAM IN COLLABORATION WITH THE MINISTRY OF HEALTH AND CHILD WELFARE, MANICALAND PROVINCE

USAID FROM THE AMERICAN PEOPLE
MCHIP Maternal and Child Health Integrated Program

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2. VHWs who participated in the assessment.
3. Clients/local communities in Mutare and Chimanimani districts who participated in the assessment.
4. USAID/Zimbabwe.

ACRONYMS AND ABBREVIATIONS

ACT	Artemesinin-based Combination Therapy
ANC	Antenatal Care
CBA	Controlled Before-After (study design)
CB-MNCM	Community-based Maternal, Newborn, and (community) Case Management
CB-MNCH	Community-based Maternal, Newborn, and Child Health
CCM	Community Case Management
CHWs	Community Health Workers
DHE	District Health Executives
EDD	Estimated Date of Delivery
EHTs	Environmental Health Technicians
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency syndrome
ITNs	Insecticide treated Mosquito nets
LNMP	Last Normal Menstrual Period
MCHIP	Maternal and Child Health Integrated Program
MDGs	Millennium Development Goals
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn, and Child Health
MNCM	Maternal, Newborn, and (community) Case Management
MOHCW	Ministry of Health and Child Welfare
ORS	Oral Rehydration Solution
PNC	Postnatal Care
PQI	Performance and Quality Improvement
RDTs	Rapid Diagnostic tests
SBM-R	Standards-based Management and Recognition
VHWs	Village Health Workers
ZDHS	Zimbabwe Demographic and Health Survey

1. INTRODUCTION

1.1. BACKGROUND

Zimbabwe has reported significant challenges in meeting the Millennium Development Goal (MDG) targets related to maternal and child health. The maternal mortality ratio (MMR) has more than trebled from 283/100,000 live births in 1994 to 960/100,000 live births in 2010/11 [1]. Under-5 mortality has also risen significantly over the same period, with neonatal mortality contributing to about a third of these deaths. Diarrhea, pneumonia, and malaria remain significant causes of disease burden in children [2]. Some progress has however been noted in reducing the burden of malaria, tuberculosis, and HIV/AIDS.

Effective interventions to reduce maternal, newborn, and child deaths are known. They however need to reach more people. Significant progress has been made in improving access to and quality of maternal, newborn, and case management (MNCM) services at the health facility level. Coverage of community-based-MNCM (CB-MNCM) services remains low and even where it is provided, service quality is unknown. Yet, early antenatal care (ANC) booking, institutional delivery with a skilled attendant, home visits for mothers and newborns in the first week of life, and prompt and effective treatment of common illnesses are interventions known to save lives of mothers, newborns, children, and adults [3].

In Zimbabwe, the policy environment has been made conducive for implementing most CB-MNCH interventions through a number of national-level initiatives. In response to parasite resistance to monotherapies for example, the first line malaria treatment policy was changed from chloroquine to use of artemisinin-based combined therapies (ACTs) for treating uncomplicated malaria. The policy has been extended to cover treatment of uncomplicated malaria by community-based health workers including Village Health Workers (VHWs). Facility-based health workers have been oriented on the new treatment guidelines and the management of uncomplicated malaria at the facility has since changed to comply with the policy. Secondly, the national curriculum for VHWs on community-based maternal, newborn, and child health (CB-MNCH) has been updated and provides strong guidance on the CB-MNCH program. However, just like for community case management, compliance with performance standards during home visits for ANC and postnatal care (PNC) by VHWs has not been fully documented.

The Maternal and Child Health Integrated Program (MCHIP/Zimbabwe) and the Ministry of Health and Child Welfare (MOHCW) district teams in Mutare and Chimanimani have identified supporting a rigorous documentation of lessons learnt in introducing and scaling up the use of rapid diagnostic tests (RDTs) and ACTs in malaria community case management (CCM), and in conducting ANC and PNC home visits by VHWs a priority activity that will contribute significantly to the evidence base for policy advocacy and for scale-up plans at program level. This baseline report provides a brief overview of the organization of CB-MNCH activities in Mutare and Chimanimani districts, describes a performance and quality improvement approach that MCHIP and the two District Health Executives (DHEs) are supporting, and lastly presents findings from a CB-MNCH performance and quality improvement baseline assessment carried out in Mutare and Chimanimani districts of Manicaland province in July 2012 targeting VHWs.

1.2. COMMUNITY-BASED MNCH ACTIVITIES IN MUTARE AND CHIMANIMANI DISTRICTS, MANICALAND

The 2010/11 Zimbabwe Demographic and Health Survey (ZDHS) ranks Manicaland as the province with the poorest indicators for maternal, newborn, and child health. Rates for institutional delivery, skilled

attendance at delivery, PNC coverage, and immunization coverage are among the worst in the country while maternal, newborn, and under-5 mortality rates are among the highest.

Several interventions are being implemented in the province in general, and in the two districts in particular. Both districts have a fairly high coverage of health facilities and VHWs needed to support MNCH services. Since 2011, MCHIP has been supporting the two districts to improve performance and quality of MNCH services at facility level. In 2012, MCHIP expanded the support to include VHWs working at community level through a community-based performance and quality improvement approach.

The community-based performance and quality improvement (cPQI) approach that is being used by MCHIP to support VHWs at community level is based on a generic performance improvement cycle of defining desired performance by developing performance standards, using performance standards to measure the gap between desired performance and actual performance, and analyzing the magnitude and causes of the performance gap and implementing interventions to close the performance gap [4]. The process is cyclical and will eventually result in actual performance approximating desired performance. The desired performance standards were set based on national policies and guidelines as defined in the following key documents developed by the MOHCW: Community Based Care for Mothers and Newborns: Manual for Village Health Workers; Guidelines for Management of Malaria in Zimbabwe: Home and Community Level; Village Health Worker Training Curriculum; and various other policy/strategy documents.

Regarding ANC home visits for pregnant women, VHWs are expected to be able to provide a minimum of two ANC home visits to every pregnant woman in their catchment area. The objective of the first ANC home visit is to identify pregnant women early enough and mobilize them for early ANC booking at the health facility. The objective of the second ANC home visit is to mobilize women for institutional delivery with a skilled attendant. Currently, about a third of women are delivering at home without a skilled attendant.

With respect to PNC home visits, VHWs are expected to make at least three PNC home visits, preferably on day 1, day 3, and before day 7 post-delivery. The objective of the PNC home visit is to detect home deliveries, check for danger signs, and mobilize mothers and newborns to visit health facilities for the scheduled and emergency visits. Information is scant on PNC home visits. Facility data shows that relatively fewer women attend PNC in the first week of delivery than those that attend ANC.

Lastly, for community case management, VHWs are expected to manage common uncomplicated illnesses at community level, detect and refer complicated cases, and provide support for treatment adherence activities at community level. The current package under community case management is comprised of oral rehydration solution (ORS) for managing diarrhea, early detection of breathing difficulties and referral, managing uncomplicated malaria using ACTs/RDTs and referring complicated cases, and general home care for common ailments, including colds and aches/pains. Malaria community case management is the most complete and significant component of community case management in the current package of VHWs, and therefore forms the core area of inquiry into PQI activities in CCM for VHWs.

2. THE COMMUNITY PQI BASELINE ASSESSMENT

2.1. The Baseline Assessment Framework

The cPQI model is being implemented as a performance and quality improvement operations research collaboration between MCHIP Zimbabwe and the Mutare and Chimanimani DHEs. The model is a three-step performance improvement cycle as described above, comprised of:

- Setting performance standards: which was done in a consultative process with health care workers (HCWs) and DHEs in Mutare and Chimanimani;

- Measuring actual performance: this baseline report describes the process and findings from the baseline assessment;
- Implementing action plans to close performance gaps and documenting lessons learnt: This component will be covered in the final PQI report.

In the following sections we describe in detail the baseline assessment process and findings for the cPQI activities on CB-MNCH services provided by VHWs in Mutare and Chimanimani districts.

2.2. PROBLEM STATEMENT

The ACTUAL performance of Village Health Workers in terms of the quality of maternal, newborn, and case management care they provide has not been fully documented. Yet this information, which remains largely unknown, is critical in defining VHWs performance gaps and for targeting performance and quality improvement interventions.

2.3. SIGNIFICANCE OF THE BASELINE ASSESSMENT

Revitalizing VHWs and community-based MNCH activities are national priorities. Improving CB-MNCH activities has several outcome benefits: early booking for ANC, increased institutional deliveries, increased PNC home visits, and early detection and prompt management of common illnesses. In Zimbabwe, information on what happens during these contacts with VHWs is not well documented and the impact of VHWs' work in CB-MNCH is not fully documented. A structured baseline assessment is therefore necessary to document VHW baseline performance in CB-MNCH service delivery, define performance gaps, and inform performance and quality improvement strategies for VHWs.

2.4. OBJECTIVES

The purpose of the assessment is to measure the baseline performance and quality of maternal, newborn, and community case management services provided by VHWs at community level.

Specific objectives of the assessment are to:

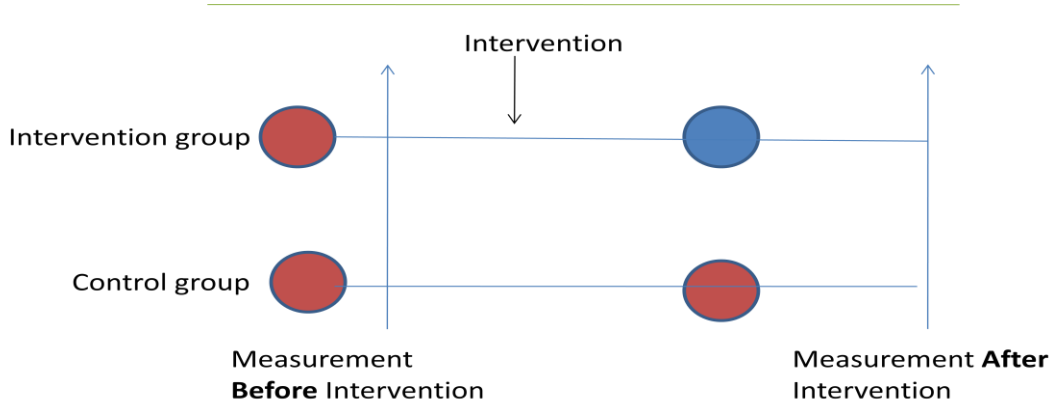
- Measure the baseline availability of commodities for CB-MNCH for VHWs.
- Measure the baseline compliance of VHWs with CB-MNCH quality of care performance standards for ANC, PNC, and community case management of illness in children under the age of 5.

2.5. METHODOLOGY

2.5.1. DESIGN

The baseline assessment was a cross sectional descriptive survey. It was carried out as the pre-treatment measure of a Controlled Before-After (CBA) intervention study in cPQI/MNCH. The CBA intervention study is comprised of measuring actual performance BEFORE an intervention in control and treatment arms, implementing the intervention in the treatment arm, repeating the performance measurement in both arms AFTER implementing the intervention [5]. As illustrated in the CBA figure below, this baseline assessment constitutes the 'BEFORE' intervention/treatment measurement.

FIGURE 1: ILLUSTRATION OF THE CONTROLLED-BEFORE-AFTER INTERVENTION STUDY DESIGN (ADAPTED)



As shown above, VHWs were allocated into intervention (treatment) and control arms of the study. The assessment measured the baseline performance and quality of MNCM services in both arms. Over a six month period, an intervention package will be implemented in the intervention arm only. At the end of the six months, a second similar measurement will be carried out to assess the changes in performance and quality of MNCM service provision in both arms. The CBA treatment covers community-based ANC, PNC, and community case management of illnesses in children under age 5, including malaria. Specifically, the treatment package is comprised of two main components:

- **Innovative multi-dimensional supportive supervision**: this consists of developing a set of performance and quality improvement standards, building capacity of HCWs and VHW peers to conduct supportive supervision, and supporting the HCWs and VHW peers in carrying out supportive supervision.
- **Community health information system***:* a robust community health information system will be implemented comprised of harmonizing and standardizing data collection and reporting forms, tools, and job aids for all aspects of CB-MNCM; building capacity of VHWs, peer supervisors, health workers and managers to utilize the forms and tools; and establishing a database and data reporting mechanism for the flow of data from community to health facility to higher levels of the MOHCW.

2.5.2. ASSESSMENT SETTING

The baseline assessment was carried out in communities in the catchment areas of 16 facilities participating in similar facility-based quality improvement activities in Mutare and Chimanimani districts of Manicaland province. These communities have active, trained VHWs. Table 1 shows the target sample and health facilities included in the assessment.

TABLE 1: DISTRIBUTION OF HEALTH FACILITIES AND VHWS IN TREATMENT AND CONTROL GROUPS

Mutare District (Control)		**Chimanimani District (Treatment)**	
Name of Facility	**Number of VHWs**	**Name of Facility**	**Number of VHWs**
Burma Valley	6	Chakohwa	6
Marange	4	Biriiri	14
Chiwere	4	Muchadziya	5
Chitakatira	5	Mutsvangwa	8
Zimunya	9	Chimanimani	8
Gutaurare	5	Nyanyadzi	5
St Andrews	4	Rusitu	11
Gwindingwi	4	Nyahode	6

Total	**41**	**Total**	**63**

2.6. SAMPLE

2.6.1. SAMPLE SIZE

The sample size for VHWs was calculated with the intention to reject a null hypothesis that 20% of VHWs satisfy the PQI standard for "checking for danger signs in sick children". A total sample size of 80 VHWs, comprised of 40 VHWs in the intervention arm and 40 in the control arm, was required for the study.

2.6.2. SELECTING VHWS

Sampling of VHWs was multi-stage as follows:

- First, one district, Chimanimani, was purposively selected to be the intervention district. Mutare automatically became the control.
- Second, in Chimanimani district all of the eight health facilities participating in the MCHIP-supported facility-based PQI (Standards-based Management and Recognition, or SBM-R) activities were included in the study. A total of 63 VHWs in the catchment areas of these eight selected facilities were recruited into the treatment arm of the study.
- Lastly, eight health facilities from Mutare district participating in the MCHIP-supported PQI activities were selected and included into the control arm through purposive sampling by carefully matching Mutare facilities to facilities selected for the treatment arm. Matching criteria considered facility size, population size, staffing levels, number of VHWs, and geography. A total of 43 VHWs were included for Mutare district.

Inclusion criteria at the level of the health facility level: The study design had predetermined the health facilities participating in the facility-based SBM-R activities in each district for inclusion in the study.

Inclusion criteria for VHWs: All VHWs working in the catchment areas of a health facility included in the study were automatically included in the study.

Exclusion criteria: Only predetermined health facilities and VHWs were included in the study. There were no substitutions.

2.7. DATA COLLECTION AND ANALYSIS

2.7.1. DATA COLLECTION INSTRUMENTS

Three separate data collection instruments were used in this assessment**:**

- **Tool 1: VHW Profile Tool –** The tool aimed at obtaining the demographic data of the VHW, training done and duration of the training period, nature of supportive supervision and technical expertise of the supervisor. The instrument also collected data on types of data collection registers used by the VHWs and the completeness of the data, the reporting system, and feedback mechanisms.
- **Tool 2: VHW Kit Inventory Checklist –** A structured checklist was administered to assess the availability and storage conditions of medicines, equipment and supplies. Data was also collected on the sources of the medicines, equipment and supplies.
- **Tool 3: Case Observation Checklists –** This was a structured case observation instrument used for observation of ANC home visits for pregnant women, PNC home visits, and community case management focusing on sick children with fever and diarrhoea. Content of the checklists for

community ANC/PNC home visits was based on the July 2011 MOHCW Village Health Training Manual. Content for the community case management checklist was adapted from WHO/UNICEF community case management manuals and national malaria community case management training manuals. In all cases, actual observation of VHWs counselling and managing clients was prioritized. Where real cases were not available to be observed however, survey enumerators simulated cases using training mannequins.

Survey instruments were developed in consultation with MOHCW counterparts from Manicaland (see Annex 1 for a list of people who participated in a study protocol design and instrument review workshop). Survey instruments are available upon request from MCHIP/Zimbabwe (contact Hillary@mchipzim.org).

2.7.2. DATA COLLECTION

Data collection was carried out by 23 health care workers in Chimanimani District and 22 health care workers in Mutare district, working in five teams of approximately four people in each district. Each team had a nurse as a team leader, one Environmental Health Technician (EHT), one technical officer from MCHIP and either one Nutrition Assistant or one Health Information Officer (see Annex 2 for a list of enumerators who participated in each district). A three-day training course on cMNCH skills update and data collection standardization was held in Chimaninani District from the 24th to the 27th of July 2012. The training included participants from both Chimanimani and Mutare districts. In total, twenty-eight nurses and EHTs from Chimanimani and Mutare and eight officers from MCHIP participated in the training. The training was comprised of two days of knowledge/skills updates and standardization of clinical skills observation; and one day of practical field testing of the instruments. In Mutare District, data collection was conducted from 30 July – 4 August 2012 and in Chimanimani District from 5-11 August 2012.

2.7.3. DATA MANAGEMENT

Data processing was commenced at field level with all questionnaires checked for completeness of responses on the inventory and demographic profile instruments. Each VHW was given a unique identification number comprised of the first letter of the district, first three letters of the health facility, and a number in chronological order. This facilitated accuracy of data entry by minimizing duplications and omissions.

Quality of care scoring was recorded according to a cMNCH PQI checklist**.** Each step (performance verification criterion) in the performance of a task was scored as a "1" on the checklist if it was performed correctly, "0" if not performed correctly, or "2" if the criteria was not applicable. Each quality of care standard/task was awarded an overall score of "1" if all of the steps/verification criteria were performed correctly, or "0" if any of the verification criteria or steps were not performed correctly. Data entry and analysis was carried out in Microsoft Excel.

Primary datasets for this assessment are available upon request from MCHIP/Zimbabwe (contact Hillary@mchipzim.org).

2.8. ETHICAL CONSIDERATIONS

Authority to conduct the study was obtained from MOHCW. Data collection tools were pretested and enumerators were trained on the study instruments. Consent was obtained prior to collection of data from all VHWs surveyed and all clients observed.

2.9. LIMITATIONS

The baseline assessment is community-based and retaining the conditions for strict 'treatment' and 'control' arms is a challenge. The inclusion criteria for facilities is purposive to build on existing interventions at facility level so the sampled facilities will not be representative enough for nationwide generalizability of findings. In some cases, where actual clients were not available, case observations were based on simulations which may not approximate real-life case management perfectly.

3. ASSESSMENT FINDINGS

Assessment findings are presented in five main categories below: (1) VHW sample characteristics; (2) availability of VHW commodities; (3) quality of care in ANC home visits; (4) quality of care in PNC home visits; and (5) quality of care in managing sick children.

3.1. SAMPLE CHARACTERISTICS

3.1.1. SAMPLE COVERAGE

The target sample was to observe 80 VHWs (40 in each arm), each managing at least one sick child, performing at least one ANC home visit and one PNC home visit, and to complete a commodities inventory for each of the 80 VHWs. Table 2 below indicates actual numbers of VHWs sampled and observations made by category relative to targets. Sampling targets were actually exceeded in many areas.

TABLE 2: THE SAMPLE COVERAGE FOR VHW BASELINE ASSESSMENT CASE OBSERVATIONS IN MUTARE AND CHIMANIMANI DISTRICTS, MANICALAND

Component		Planned sample, N	Actual sample, N	Sample coverage (%)
ANC home visit case observations	Treatment	40	63	158
	Control	40	40	100
PNC home visit case observations	Treatment	40	62	155
	Control	40	41	103
Managing sick child case observations	Treatment	40	63	158
	Control	40	41	103
VHWs	Treatment	40	63	158
	Control	40	41	103
Facilities	Treatment	8	8	100
	Control	8	8	100

3.1.2. VHW PROFILE

Data was collected on VHW attributes including age, level of education, sex, type of pre-service training received, and years of experience, among others (Table 3). These attributes may influence VHWs' performance and capacity to learn.

TABLE 3: DEMOGRAPHIC CHARACTERISTICS OF VHWS ASSESSED IN MUTARE AND CHIMANIMANI DISTRICTS, MANICALAND

Characteristic		Control (N=41)		Treatment (N=63)	
		N	%	N	%
Age	Mean (yrs)	48.8		43.8	
	Standard deviation (yrs)	12.2		9.1	

Level of Education	Secondary	34	85	44	69
	Primary	6	15	19	30
Sex	Male	6	15	1	2
	Female	34	85	62	98
Type of training	3 weeks	20	50	37	57
Years of experience	0-5yrs	16	40	31	49
	Above 5yrs	24	60	32	51

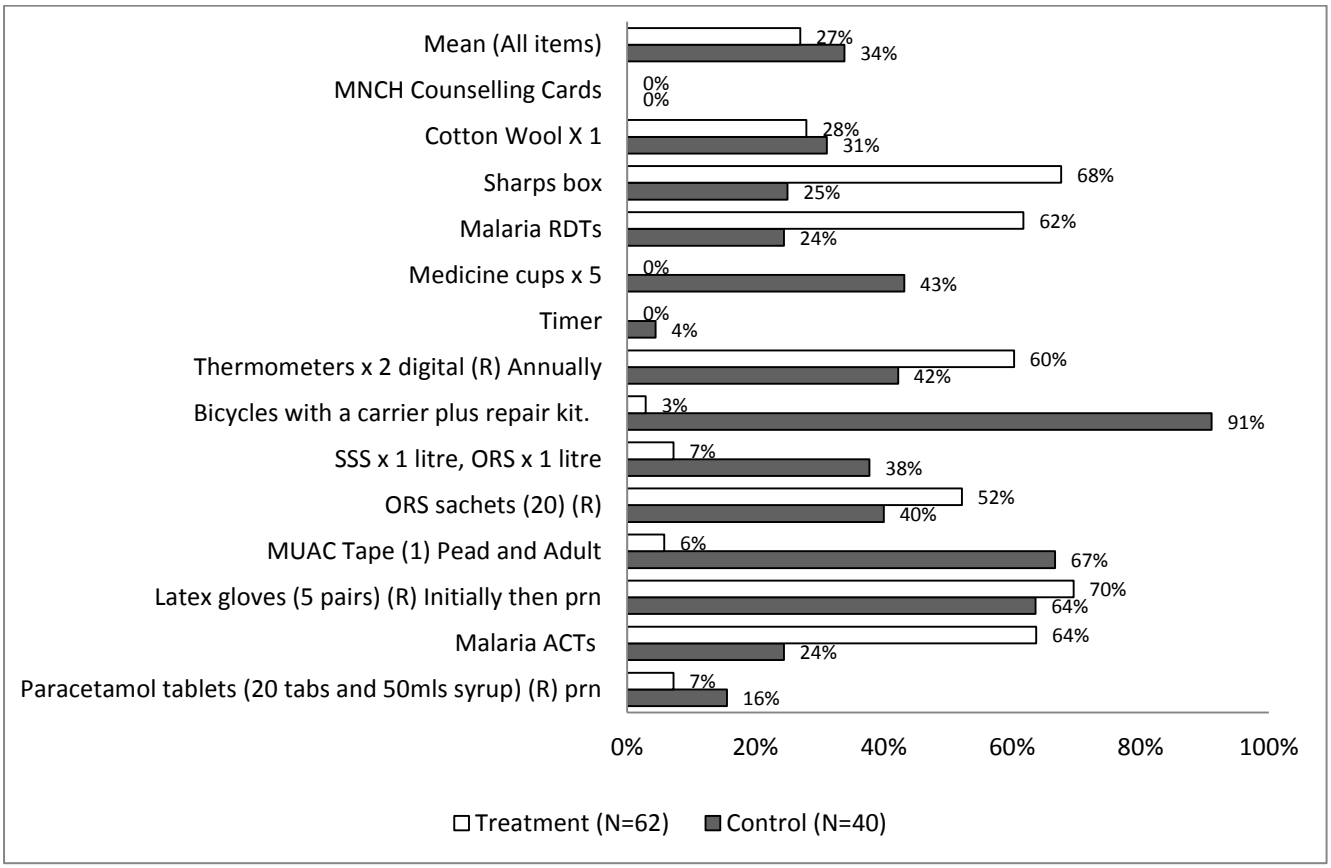
VHWs in the treatment group were relatively younger, fewer had attained a higher level of education, and had fewer years of experience than their control group counterparts.

3.2. AVAILABILITY OF VHW COMMODITIES

The inventory of VHW commodities included all items in the MOHCW's national VHW Kit, bicycles, medicines, home treatment remedies/preparations, uniforms, infection prevention items, and all other items VHWs use while discharging her/his duties.

Figure 2 shows the availability status of select items needed by VHWs, on the day of the assessment. The overall availability status for all items was 34% and 27% for control and treatment groups, respectively. The average variability within each group was about 29% for both groups.

FIGURE 2: AVAILABILITY STATUS OF VHW COMMODITIES IN MUTARE AND CHIMANIMANI DISTRICTS AT THE TIME OF SAMPLING



Generally speaking, VHWs in either group did not have enough items to support provision of quality MNCH services on the day of the assessment.

3.3. QUALITY OF CARE DURING ANC HOME VISITS

VHWs are trained to be able to conduct a minimum of two ANC home visits for each pregnant woman in their catchment area. Quality of care during ANC home visits was assessed according to three main areas:

- Compliance with standards related to correctly obtaining personal identifier details of the woman and her current pregnancy;
- Compliance with standards related to correct assessment of the pregnancy;
- Compliance with standards related to managing pregnant women through correct clinical decision making using assessment findings.

Table 4 shows the findings on the adherence to performance standards for tasks related to ANC home visits.

TABLE 4: ADHERENCE TO PERFORMANCE STANDARDS BY VHWS DURING ANC HOME VISITS IN MUTARE AND CHIMANIMANI DISTRICTS, MANICALAND

ANC Performance Standard	Percent (%) VHWs meeting performance standard			
	Control		Treatment	
	N	%	N	%
Socio-demographic details				
Asked for personal identifier details	41	63.4	63	44.4
Assessment				
Asked about last normal menstrual period (LNMP)?	41	24.4	63	2.3
Checked for ANC booking status?	42	68.3	63	68.2
Calculated estimated date of delivery (EDD)?	41	14.6	62	4.5
Checked for danger signs?	41	19.5	62	25.6
Checked for compliance with ANC schedule?	41	82.9	62	81.4
Reviewed status of the birth plan?	41	65.9	61	30.2
Classification and management				
Urgently referred woman with danger signs to health facility?	33	9.4	41	7.3
Counseled woman un-booked or defaulting ANC?	26	30.8	30	20.0
Counseled woman booked and not defaulting ANC?	32	31.3	47	21.3
Correctly filled out the home visit card?	41	24.4	60	18.3
Treated the woman with respect?	41	87.8	61	65.6
Mean percent score for ANC home visit (%)	**43.6**		**31.1**	
Standard deviation for ANC home visit (%)	**28.0**		**27.0**	

Adherence to performance standards was below 50% for both groups. On average, performance of control group VHWs was better than that for those in the treatment group, with average compliance scores of 43.6% and 31.1% of ANC standards met, respectively. Variation in performance within both groups was comparable, with standard deviations of 28.0% for the control group and 27.0% for the treatment group.

Performance of both groups was a dichotomy: it was stronger (over 69% of standards met) in tasks of a general (and simpler) nature such as checking for the woman's ANC booking status and checking for compliance with the ANC schedule and instructions. VHW performance was low however (about 20% of standards met) for more technical tasks related to specific objectives of a scheduled ANC home visit like checking on last normal menstrual period (LNMP), calculating estimated date of delivery (EDD), checking for danger signs, and correctly classifying and managing identified issues/problems.

3.4. QUALITY OF CARE DURING PNC HOME VISITS

Quality of care provided by VHWs during a PNC home visit was assessed using an observation checklist similar to the one used for ANC home visits, which covered the following three performance standards for both the mother and the baby:

- Compliance with standards related to correctly obtaining personal identifier details of the mother and the baby (including caregiver details) covering socio-demographic profile, labour, delivery and birth details;
- Compliance with standards related to correct assessment of the mother and baby by checking for danger signs and checking for main conditions/problems common during the post-natal period;
- Compliance with standards related to managing the mother and baby, including referral where indicated, focused counseling as indicated, and home treatment where indicated.

Table 5 includes findings from the clinical observations for PNC home visits.

TABLE 5: ADHERENCE TO PERFORMANCE STANDARDS BY VHWS DURING PNC HOME VISITS IN MUTARE AND CHIMANIMANI DISTRICTS, MANICALAND

PNC Performance Standard	Percent (%) VHWs meeting performance standard			
	Control		Treatment	
	N	%	N	%
PNC for mother				
Asked about personal details of mother	41	53.7	61	39.3
Asked about delivery details	39	43.6	62	40.3
Checked for danger signs in mother	41	17.1	62	6.5
Checked if mother attending PNC at facility	36	69.4	58	74.1
Checked if mother compliant with PNC instructions	34	47.1	52	51.9
Referred mother where indicated	34	26.5	51	31.4
Counseled mother for own health	36	22.2	49	22.4
PNC for baby				
Asked about personal details of baby	40	60.0	62	37.1
Asked about birth details for baby	38	34.2	62	18.0
Checked for danger signs in baby	40	20.0	61	1.6
Referred baby where indicated	34	29.4	51	29.4
Counseled Caregiver for baby	36	36.1	50	20.0
Treated mother-baby pair with respect	41	85.0	62	67.7
Filled out home visit records	41	12.2	62	12.9
Mean percent score for PNC home visit (%)	**39.7**		**32.3**	
Standard deviation for PNC home visit (%)	**21.3**		**21.4**	

Overall, adherence to PNC performance standards was 39.7% for the control group and 32.3% for the treatment group. Variability of performance within each group was comparable for both groups, at about 21%.

As noted under ANC home visits, VHWs complied better with tasks of a general nature requiring minimal or no technical skills/knowledge like checking for PNC attendance at health facility, obtaining birth details, obtaining personal details of the mother/caregiver and baby, and treating clients with respect. Very few VHWs performed tasks requiring more technical knowledge and skills (e.g., checking for danger signs,

referring urgently where danger signs are present, providing targeted counseling using the correct counseling cards, and documenting visits completely) correctly.

3.5. QUALITY OF CARE IN MANAGING SICK CHILDREN

VHWs are expected to be able to identify very sick children and refer them to the health facility urgently, to elicit signs and symptoms of common childhood conditions and diseases, to develop a management and treatment plan and implement it (including for home treatment of diarrhea and malaria), and to promote general health of the family.

The baseline assessment evaluated the quality of care provided by VHWs to sick children under the following three main performance areas:

- Asking about personal details of the sick child and caregiver, including details about the home and family environment;
- Assessing the sick child through checking for danger signs and checking for common childhood problems and disease conditions;
- Classifying and managing sick children based on assessment findings, including referring, treating in the home, and counseling as indicated.

Findings are presented below in Table 6.

TABLE 6: ADHERENCE TO PERFORMANCE STANDARDS BY VHWS IN MANAGING SICK CHILDREN IN MUTARE AND CHIMANIMANI DISTRICTS, MANICALAND

Performance Standard for managing a sick child	Percent (%) VHWs meeting performance standard			
	Control		Treatment	
	N	%	N	%
Socio-demographic details				
Asked for personal details of sick child	40	42.5	63	47.6
Checked if initial or follow-up visit	40	22.5	63	34.9
Assess and Classify				
Checked for six danger signs	40	0.0	63	1.6
Checked for all main conditions	39	0.0	55	0.0
Observer and VHW agreed on classification	40	55.0	63	61.9
Treatment plan				
Referred child where indicated	33	39.4	56	44.6
Treated child at home where indicated	31	6.3	41	22.0
Correctly filled out details of consultation	40	20.0	62	27.4
Treated child and Caregiver with respect	40	82.5	63	69.8
Mean percent score for managing a sick child (%)	**29.8**		**34.4**	
Standard deviation for managing a sick child (%)	**27.7**		**24.4**	

VHW adherence to performance standards for managing sick children in the community was around one-third for both groups (29.8% of standards met in the control group versus 34.4% of standards met in the treatment group). Performance variability within both groups was similar at 27.7% in the control group and 24.4% in the treatment group respectively.

On average, both groups performed better in obtaining personal details of sick children, treating sick children and their caregivers with respect, and to some extent referring sick children. In terms of all tasks

required for managing a sick child, adherence to performance standards was very low in both groups in virtually all components of the care process. Whereas overall performance in the control group tended to be slightly better for ANC and PNC home visits, the treatment group was better than the control group in managing sick children.

CONCLUSIONS

1. COMMODITIES: VHWs in both control and treatment groups had very limited supply of commodities. Baseline data will be used for developing and implementing a procurement and distribution plan for both VHW groups.

2. QUALITY OF CARE DURING CLIENT CONTACTS: VHWs in both groups satisfied most of the tasks of a general nature. Baseline data should be used for developing and implementing a competency-based learning program with a structured strategy for transfer of learning and retention of skills, especially in the areas of client assessment, classification, and management.

3. Findings of the assessment should be used for targeted support to the VHW program beyond the research setting.

ANNEXES

ANNEX 1: PROVINCIAL AND DISTRICT PARTICIPANTS WHO DEVELOPED THE STUDY PROTOCOL AND REVIEWED THE INSTRUMENTS

NO.	NAME	ORGANISATION	STATION	POSITION
1	Rangayi Martha	MOHCW	DMOs Office	Pharmacy Tech
2	Dube Alice	MOHCW	Nyanyadzi	RGN/Midwife
3	Mukwakwasha Tranos	MOHCW	DMOs Office	DEHO
4	Tinofa Elizabeth	MOHCW	Biriiri	SIC
5	Mbano Otilia	MOHCW	Chakohwa	SIC
6	Kalipeza Mercy	MOHCW	St. Andrews	RGN
7	Nyamadzawo Eunice Tendai	MOHCW	Mutare DHT	SICC
8	Chatora Joylyn	MOHCW	Mutare DHT	Health Info
9	Dangirwa Lizzie	MOHCW	Burma Valley	PCN
10	Manyumwa Eugenia	MOHCW	Bazeley Bridge	PCN
11	Mashana Emmah	MOHCW	Biriiri	RGN
12	Chadamwoyo Daphine	MOHCW	Zimunya	PEHT
13	Zvauya Celbert	MOHCW	Marange	PEHT
14	Mukoko Dorcas	MOHCW	Zimunya	SRNM
15	Manyeu July	MOHCW	St. Andrews	PEHT
16	Mukundu Talkmore	MOHCW	Chakohwa	EHT
17	Ruguwa Johannes	MOHCW	Gutaurare	PEHT
18	Kamusikiri Patrick	MOHCW	Nyanyadzi	PEHT
19	Marange Caleb	MOHCW	Burma Valley	PEHT
20	Machawira Tawanda	MOHCW	MPH Lab	MLSc

21	Muresherwa George	MOHCW	DMOs Office	DHIA
22	Mambodo Sam	MOHCW	Mutsvangwa	PCN
23	Mutogo Francisca	MOHCW	DMOs Office	HRO
24	Samushonga Tendai	MOHCW	DMOs Office	DHPO
25	Binde Pardon	MOHCW	Mutare DHT	Nut Assistant
26	Mufudze Tawanda	MOHCW	Mutare DHT	EHO
27	Sifovo Sibongile	MOHCW	DMOs Office	DNO
28	Chikondowa Witness	MOHCW	Mutambara	DLSc
29	Dzemunyasi Edward	MOHCW	Mutsvangwa	EHT
30	Dhlakama Wardlove	MOHCW	Gutaurare	PSCN/Midwife
31	Siyafanana Moses	MOHCW	Biriiri	EHT
32	Chiguvare Hillary	MCHIP	Harare	Technical Director
33	Mundoringisa Constance	MCHIP	Mutare	Provincial MH Coordinator
34	Dangaiso Elizabeth	MCHIP	Harare	NH Coordinator
35	Chiwawa Edhina	MCHIP	Mutare	Provincial MH Coordinator
36	Muvirimi Eveline	MCHIP	Mutare	Provincial NH Coordinator
37	Mangwanya Leocadia	MCHIP	Harare	CH Technical Officer
38	Nyasulu Grant	MCHIP	Mutare	Provincial Immunization Coordinator
39	Rondozai Florence	MCHIP	Mutare	Provincial CH Coordinator
40	Panganai Patience	MCHIP	Harare	Health Promotion Officer

ANNEX 2: PQI BASELINE ASSESSMENT ENUMERATOR TEAMS

PQI Baseline – Enumerators for Chimanimani District:

#	**Name**	**Designation**
1	Dube Alice	RGN/Midwife
2	Siyafanana Moses	EHT
3	Muvirimi Evelyn	MCHIP
4	Mambodo Sam	PCN
5	Kamusikiri Patrick	EHT
6	Chiwawa Edina	MCHIP
7	Tinofa Elizabeth	SIC
8	Mukundu Talkmore	EHT
9	Panganai Patience	MCHIP
10	Mbano Ottilia	RGN/Midwife
11	Binde Pardon	Nutrition Assistant
12	Mangwanya Leocadia	MCHIP
13	Mashana Emmah	RGN
14	Nyasulu Grant	MCHIP
15	Joylyn Chatora	DHIO
16	Florence Rondozai	MCHIP
17	Tafadzwa Mufudza	EHO
18	Eunice Nyamadzawo	SIC - Community
19	Frank Chikhata	MCHIP
20	George Muresherwa	DHIO

PQI Baseline – Enumerators for Mutare District:

#	Name	Designation
1	Chatora Joylyn	DHIO
2	Zvauya Celbert	PEHT
3	Manyumwa Eugenia	PCN
4	Chadamoyo Daphine	DEHT
5	Mufudza Tafadzwa	EHO
6	Nyamadzawo Eunice	SICC
7	Dangirwa Lizzie	PCN
8	Mukoko Dorcas	RGN
9	Kalipeza Mercy	RGN
10	Ruguwa Johannes	EHT
11	Dhlakama Wardlove	P.S.C.N/N
12	Binde Pardon	Nut. Assistant
13	Panganai Patience	MCHIP
14	Nyasulu Grant	MCHIP
15	Rondozai Florence	MCHIP
16	Manyeu July	PEHT
17	Marange Caleb	P.E.H.T
18	Mundoringisa Constance	MCHIP
19	Eveline Muvirimi	MCHIP
20	Elizabeth Dangaiso	MCHIP
21	Leocadia Mangwanya	MCHIP

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